

REMARKS

This request for reconsideration is filed in response to the Office Action dated June 26, 2007. For the following reasons this application should be allowed and the case passed to issue.

Claims 15-25 are pending in this application. Claims 15-25 have been rejected. Claims 1-14 were previously canceled.

Claim Rejections Under 35 U.S.C. § 103

Claims 15-23 and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sugita et al. (US 6,455,179) in view of Tanaka et al. (U.S. Pat. No. 6,803,142). This rejection is traversed, and reconsideration and withdrawal thereof respectfully requested. The following is a comparison between the present invention, as claimed, and the cited prior art.

An aspect of the invention, per claim 15, is a fuel cell assembly mounted in a vehicle comprising a fuel cell stack comprising plural fuel cells stacked in a fixed direction and a pair of end plates which are stacked on both ends of the plural fuel cells. A stacking bolt penetrates the pair of end plates in the fixed direction and maintains the plural fuel cells in a stacked state. A case houses the fuel cell stack, and a bolt penetrates an end plate and the case in a direction perpendicular to the fixed direction to support the fuel cell stack to the case.

Another aspect of the invention, per claim 18, is a fuel cell assembly mounted in a vehicle comprising a fuel cell stack comprising plural fuel cells stacked in a fixed direction. A stacking bolt is disposed along the fixed direction to maintain the plural fuel cells in a stacked state. A fluid supply/discharge block is fitted to an end of the fuel cell stack to supply fluid from outside to each of the plural fuel cells and discharge fluid from each of the plural fuel cells to outside. A case houses the fuel cell stack and the fluid supply/discharge block, and a bolt penetrates the fluid supply/discharge block and the case in a direction perpendicular to the fixed

direction to support the fuel cell stack to the case.

Sugita et al. and Tanaka et al., whether taken in combination, or taken alone do not suggest the claimed fuel cell assemblies because the cited references do not disclose a fuel cell stack comprising plural fuel cells stacked in a fixed direction, a case housing the fuel cell stack, and a bolt which penetrates an end plate and the case in a direction perpendicular to the fixed direction to support the fuel cell stack to the case, as required by claim 15; and a fuel cell stack comprising plural fuel cells stacked in a fixed direction, a fluid supply/discharge block, a case housing the fuel cell stack and the fluid supply/discharge block, and a bolt which penetrates the fluid supply/discharge block and the case in a direction perpendicular to the fixed direction to support the fuel cell stack to the case, as required by claim 18.

The bolt penetrating the end plate and the case or the fluid supply/discharge block in a direction perpendicular to the fixed direction, according the present invention, provides improved support of the structure of the fuel cell stack against a horizontal load acting between the fuel cell stack and the case not provided by fuel cell assembly of Sugita et al. and Tanaka et al.

Sugita et al. teach brackets (168) to hold the fuel cell system to the vehicle and bolts (170a) within the brackets that are perpendicular to the fixed direction of the fuel cell stack

For the Examiner's convenience, the present invention will be contrasted with Sugita et al. by referring to an embodiment depicted in Fig. 1 of the present invention and Fig. 2 of Sugita et al. The bolts (170a) in Sugita et al. extend in the same direction as those of the present invention. However, claim 15 requires that the bolt (8) penetrates the end plate (5) and the case (3, 11) in a direction perpendicular to the fixed direction to support the fuel cell stack to the case. Claim 18 requires that the bolt (7) penetrates the fluid supply/discharge block (6) and the case (3,

11) in a direction perpendicular to the fixed direction to support the fuel cell stack to the case. The bolt (170a) of Sugita et al., however, does not penetrate an end plate nor a case, but penetrates a bracket (168).

The Sugita et al. bolt (170a) is used for fixing an end plate (24) to a vehicle (31), while the bolt (7, 8) according to the present invention is used for fixing an end plate (5) or a supply/discharge block (6) to a case (3,11). The bolt (7, 8) according to claims 15 and 18 is, therefore, functionally different from the bolt (170a) of Sugita et al.

Tanaka et al. do not cure the deficiencies of Sugita et al., as Tanaka et al. do not disclose a bolt (8) which penetrates an end plate (5) and a case (3, 11) in a direction perpendicular to the fixed direction to support the fuel cell stack to the case, as required by claim 15; or a bolt (7) which penetrates a fluid supply/discharge block (6) and the case (3, 11) in a direction perpendicular to the fixed direction to support the fuel cell stack to the case, as required by claim 18.

Obviousness can be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge readily available to one of ordinary skill in the art. *In re Kahn*, 441 F.3d 977, 986, 78 USPQ2d 1329, 1335 (Fed. Cir. 22006); *In re Kotzab*, 217 F.3d 1365, 1370 55 USPQ2d 1313, 1317 (Fed. Cir. 2000); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). There is no suggestion in Sugita et al. or Tanaka et al. to modify the fuel cell assembly of Sugita et al. so that it includes a bolt which penetrates an end plate and a case in a direction perpendicular to the fixed direction to support the fuel cell stack to the case, as required by claim 15; or a bolt which penetrates a fluid supply/discharge block and

the case in a direction perpendicular to the fixed direction to support the fuel cell stack to the case, as required by claim 18, nor does common sense dictate such modifications. The Examiner has not provided any evidence that there would be any obvious benefit in making such modifications of Sugita et al. *See KSR Int'l Co. v. Teleflex, Inc.*, 500 U.S. ____ (No. 04-1350, April 30, 2007) at 20.

The only teaching of the claimed fuel cell assemblies is found in Applicant's disclosure. However, the teaching or suggestion to make a claimed combination and the reasonable expectation of success must not be based on applicant's disclosure. *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Claim 24 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Sugita et al. in view of Tanaka et al. and further in view of Groppe (US 3,856,573). This rejection is traversed, and reconsideration and withdrawal thereof respectfully requested.

The combination of Groppe with Sugita et al. and Tanaka et al. does not suggest the claimed fuel cell assemblies because Groppe does not cure the deficiencies of Sugita et al. and Tanaka et al. Groppe does not suggest a bolt which penetrates the fluid supply/discharge block and the case in a direction perpendicular to the fixed direction to support the fuel cell stack to the case, as required by claim 18.

The dependent claims are allowable for at least the same reasons as the independent claims from which they depend and further distinguish the claimed fuel cell assemblies.

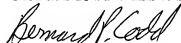
In view of the above remarks, Applicant submits that this application should be allowed and the case passed to issue. If there are any questions regarding this response or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

Application No.: 10/656,227

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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